

# SYSTEM 30

## OPERATING INSTRUCTIONS

### INTRODUCTION

The following control and indicator description should be used as a guide to insure fast and reliable operation of the system.

### OPERATING PROCEDURES

- (1) With the DSR 1300 OFF-RECORD-REWIND Switch in the OFF position, load the magnetic tape as indicated by the tape loading diagram (RA-0044).
- (2) Switch the POWER ON/OFF Switch on the System 30 to the ON position.
- (3) Rotate the DSR 1300 OFF-RECORD-REWIND Switch to the RECORD position.
- (4) Press the EOF Switch, the tape will advance about two inches.
- (5) Press the BOT Switch, the tape will advance to the load point reflective mark and stop. (Close the Model 1300 door at this point).
- (6) Load an MT/ST cartridge on the System 30 as indicated by the tape loading diagram (F-0034B). The TRANSPARENT SECTION of the MT/ST tape MUST BE located over the photocell. (PCI on the tape loading diagram.) If the tape is not loaded as prescribed the tape will advance but will not be processed (Data light not ON).

CAUTION: It is suggested that the end of data on the MT/ST tape be identified by three (3) consecutive stop codes. Two possibilities exist if the stop codes are not present.

- (a) Any data previously recorded on the tape beyond the new data will be transferred to the computer tape. If stop codes exist at the end of the old data these will cause the tape to rewind.
  - (b) If no stop codes are encountered the tape will advance until no more data (blank tape) is read from the tape. The tape will then rewind.
- (7) Press the START Switch, the tape will advance and be processed. When three (3) consecutive stop codes are detected on the MT/ST tape the cartridge will rewind until the transparent section reaches the photocell.
  - (8) Remove the tape from the take-up reel and capstan. (toothed wheel) The tape will then rewind fully into the cartridge.

- (9) Repeat Steps #6, #7, and #8 for each cartridge to be processed and recorded on the particular computer tape mounted on the DSR 1300. DO NOT TURN POWER OFF DURING CHANGES OF MT/ST CARTRIDGES.
- (10) When all the cartridges for a particular output tape have been processed, press the EOF Switch located on the DSR 1300. Set the OFF-RECORD-REWIND Switch to the REWIND position. When the computer tape is completely rewound set the OFF-RECORD-REWIND Switch to OFF.
- (11) Switch the POWER ON/OFF Switch on the System 30 to the OFF position.

### DSR 1300 RECORDER CONTROLS

#### OFF-RECORD-REWIND

A three position rotary switch, applies power to the DSR 1300 in either RECORD or REWIND positions.

In the RECORD position, data is received and recorded onto computer compatible magnetic tapes.

In the REWIND position, the magnetic tape is transferred from the take-up reel to the supply reel at high speed. Rewind mode inhibits record.

#### BOT

Beginning of Tape Switch, advances tape to load point reflective marker. The BOT Switch is active at all times and the BOT mode of operation is reset by the detection of the load point reflective marker or a rewind/unload operation.

#### EOF

Actuation of the EOF Switch writes a computer compatible tape mark on the magnetic tape.

### SYSTEM 30 CONTROLS

#### POWER ON/OFF

Applies power to the system.

#### START

Starts the processing of data, either initially or after an error stop or after the stop switch was activated. Also functions as error indicator reset.

SYSTEM 30 CONTROLS (cont'd)STOP

Stops or interrupts the processing of data. Also stops the rewind function.

REWIND

Halts the processing of data and rewinds the MT/ST tape back into the cartridge. In normal operation the MT/ST tape is automatically rewound upon detecting three (3) successive stop codes or blank tape.

PE

Indicates a parity error was detected on the MT/ST tape. Processing of data is halted until the START Switch is activated. The character in error is written all ones on the output tape.

ECHO

Indicates the DSR 1300 failed to write the proper parity on the output magnetic tape. This error condition will halt the processing of data.

MT

Indicates the magnetic tape on the DSR 1300 was either loaded improperly, broken, or the end of tape reflective marker was detected. Halts the processing of data.

DATA

Indicates that data and its correct lateral parity are being recorded on the output magnetic tape.

NOTE:

Power requirements for the System 30 --- 115V, 15 amps, 60 cycle, single phase grounded line. Separate outlets are required for the recorder and the reader unit.

A dedicated power line is preferred. Keypunches, paper bursters or other like electronic gear can create sudden fluctuating load demands which drop the amperage or generate electronic noise affecting the recorder.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

|   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| A | F0 | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | F9 | FA | FB | FC | FD | FE | FF |
| B | E0 | E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8 | E9 | EA | EB | EC | ED | EE | EF |
| C | D0 | D1 | D2 | D3 | D4 | D5 | D6 | D7 | D8 | D9 | DA | DB | DC | DD | DE | DF |
| D | C0 | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | CA | CB | CC | CD | CE | CF |
| E | B0 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | BA | BB | BC | BD | BE | BF |
| F | A0 | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | AA | AB | AC | AD | AE | AF |
| G | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 9A | 9B | 9C | 9D | 9E | 9F |
| H | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 8A | 8B | 8C | 8D | 8E | 8F |
| I | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 7A | 7B | 7C | 7D | 7E | 7F |
| J | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 6A | 6B | 6C | 6D | 6E | 6F |
| K | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 5A | 5B | 5C | 5D | 5E | 5F |
| L | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 4A | 4B | 4C | 4D | 4E | 4F |
| M | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3A | 3B | 3C | 3D | 3E | 3F |
| N | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 2A | 2B | 2C | 2D | 2E | 2F |
| O | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 1E | 1F |
| P | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F |

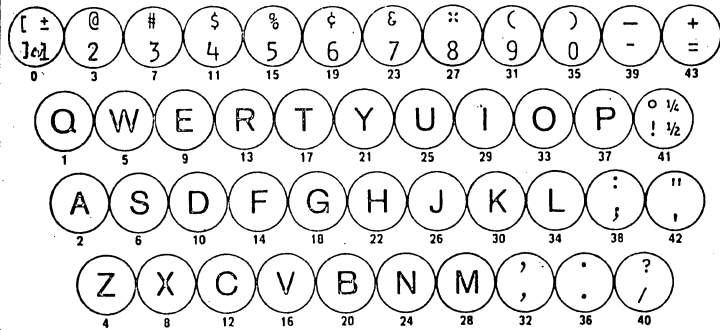
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Q  | F0 | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | F9 | FA | FB | FC | FD | FE | FF |
| R  | E0 | E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8 | E9 | EA | EB | EC | ED | EE | EF |
| S  | D0 | D1 | D2 | D3 | D4 | D5 | D6 | D7 | D8 | D9 | DA | DB | DC | DD | DE | DF |
| T  | C0 | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | CA | CB | CC | CD | CE | CF |
| U  | B0 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | BA | BB | BC | BD | BE | BF |
| V  | A0 | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | AA | AB | AC | AD | AE | AF |
| W  | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 9A | 9B | 9C | 9D | 9E | 9F |
| X  | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 8A | 8B | 8C | 8D | 8E | 8F |
| Y  | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 7A | 7B | 7C | 7D | 7E | 7F |
| Z  | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 6A | 6B | 6C | 6D | 6E | 6F |
| AA | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 5A | 5B | 5C | 5D | 5E | 5F |
| AB | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 4A | 4B | 4C | 4D | 4E | 4F |
| AC | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3A | 3B | 3C | 3D | 3E | 3F |
| AD | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 2A | 2B | 2C | 2D | 2E | 2F |
| AE | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 1E | 1F |
| AF | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F |



# KEYS

| H <sub>4</sub> | H <sub>3</sub> | H <sub>2</sub> | H <sub>1</sub> | Hexadecimal |
|----------------|----------------|----------------|----------------|-------------|
| 0              | 0              | 0              | 0              | 0           |
| 0              | 0              | 0              | 1              | 1           |
| 0              | 0              | 1              | 0              | 2           |
| 0              | 0              | 1              | 1              | 3           |
| 0              | 1              | 0              | 0              | 4           |
| 0              | 1              | 0              | 1              | 5           |
| 0              | 1              | 1              | 0              | 6           |
| 0              | 1              | 1              | 1              | 7           |
| 1              | 0              | 0              | 0              | 8           |
| 1              | 0              | 0              | 1              | 9           |
| 1              | 0              | 1              | 0              | A           |
| 1              | 0              | 1              | 1              | B           |
| 1              | 1              | 0              | 0              | C           |
| 1              | 1              | 0              | 1              | D           |
| 1              | 1              | 1              | 0              | E           |
| 1              | 1              | 1              | 1              | F           |

## STANDARD KEYBOARD



- NOTES: 1) Small number under each key is standard key number.  
2) Letters assigned to key are related to the ball being used.

### MT/ST Code

(9/Track Magnetic Tape Code without code conversion)

|                                  |                                 |
|----------------------------------|---------------------------------|
| H <sub>1</sub> - R <sub>1</sub>  | h <sub>1</sub> - T <sub>1</sub> |
| H <sub>2</sub> - R <sub>2</sub>  | h <sub>2</sub> - T <sub>2</sub> |
| H <sub>3</sub> - R <sub>2a</sub> | h <sub>3</sub> - SHIFT          |
| H <sub>4</sub> - R <sub>5</sub>  | h <sub>4</sub> - SEARCH         |

|   |                |                |                |                |                |                |                |                |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| P | h <sub>4</sub> | h <sub>3</sub> | h <sub>2</sub> | h <sub>1</sub> | H <sub>4</sub> | H <sub>3</sub> | H <sub>2</sub> | H <sub>1</sub> |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|

P - Computer Tape Parity

### EBCDIC Code

(9/Track Magnetic Tape with Code Conversion)

|   |                |                |                |                |                |                |                |                |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| P | h <sub>4</sub> | h <sub>3</sub> | h <sub>2</sub> | h <sub>1</sub> | H <sub>4</sub> | H <sub>3</sub> | H <sub>2</sub> | H <sub>1</sub> |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|

P - Computer Tape Parity

### MT/DD Tape Code

(7/Track Magnetic Tape without Code Conversion)

|                           |   |                 |
|---------------------------|---|-----------------|
| H <sub>1</sub> (1st Char) | - | R <sub>1</sub>  |
| H <sub>2</sub> (1st Char) | - | R <sub>2</sub>  |
| H <sub>3</sub> (1st Char) | - | R <sub>2a</sub> |
| H <sub>4</sub> (1st Char) | - | R <sub>5</sub>  |
| h <sub>1</sub> (1st Char) | - | Always 1        |
| h <sub>2</sub> (1st Char) | - | Always Ø        |

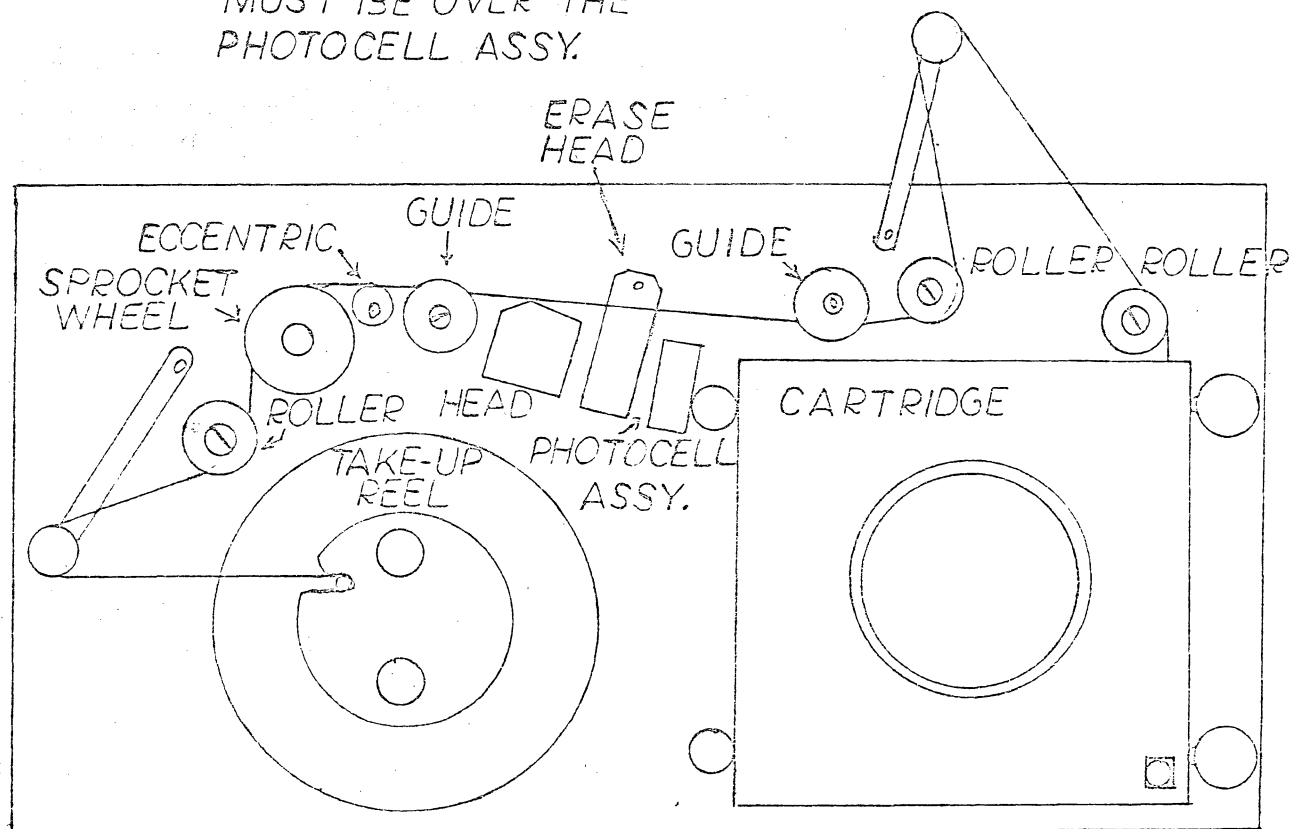
P - Computer Tape Parity

|   |                |                |                |                |                |                |               |
|---|----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| P | h <sub>2</sub> | h <sub>1</sub> | H <sub>4</sub> | H <sub>3</sub> | H <sub>2</sub> | H <sub>1</sub> | 1st character |
| P | h <sub>2</sub> | h <sub>1</sub> | H <sub>4</sub> | H <sub>3</sub> | H <sub>2</sub> | H <sub>1</sub> | 2nd character |

|                           |   |                                                                                                                  |
|---------------------------|---|------------------------------------------------------------------------------------------------------------------|
| H <sub>1</sub> (2nd Char) | - | T <sub>1</sub>                                                                                                   |
| H <sub>2</sub> (2nd Char) | - | T <sub>2</sub>                                                                                                   |
| H <sub>3</sub> (2nd Char) | - | SHIFT                                                                                                            |
| H <sub>4</sub> (2nd Char) | - | Always Ø                                                                                                         |
| h <sub>1</sub> (2nd Char) | - | Ø - If parity of character read from MT Tape is correct<br>1 - If parity of character read from MT Tape is wrong |
| h <sub>2</sub> (2nd Char) | - | Always 1                                                                                                         |



NOTE: CLEAR AREA OF TAPE  
MUST BE OVER THE  
PHOTOCELL ASSY.



TAPE PATH SYSTEM 30

DIGI-DATA CORP.  
BLADENSBURG, MD.

SHEET 1 OF 1 F-0036